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10/560,079	12/08/2005	Janne Aaltonen	4208-4281	1085

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EXAMINER	
PATEL, NIMESH	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/560,079	AALTONEN, JANNE	
	Examiner	Art Unit	
	NIMESH PATEL	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Dec. 08, 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *Dec. 08, 2005 and Mar. 11, 2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 14-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Claims 14 and 15 claim the non-statutory subject matter of a computer program. Data structures not claimed as embodied in a computer readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1754 (claim to a data structure per se held nonstatutory). Therefore, since the claimed programs are not tangibly embodied in a physical medium and encoded on a computer readable medium then the Applicants has not complied with 35 U.S.C 101.

Claims 16 and 17 claim a computer readable medium and a carrier medium, respectively, where these mediums could be reasonably interpreted as including non-statutory subject matter such as carrier waves or paper since the specification is silence as to which mediums could be specified as the carrier or computer readable medium, therefore, they do not fall under statutory subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 13 is rejected under 35 U.S.C. 112, first paragraph based on being unduly broad and as failing to comply with the enablement requirement discussed in MPEP 2164.08(a) and 2181. This claim constitutes a single means claim. See MPEP 2164.08(a).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 - 24 are under 35 U.S.C. 103(a) as being unpatentable over Brandes US Patent: US 6,920,327 B1 Jul. 19, 2005, and in view of Grilli US PGPub: US 2003/0002525 A1 Jan. 2, 2003.

Regarding claim 1, Brandes discloses,

a method for controlling a handover of a terminal (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a digital generally bi-directional communications service (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) and a digital generally unidirectional communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising the steps of:

selecting according to a predetermined criteria between the available downlink radio signals (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43), and

changing to another available downlink radio signal for at least in part performing said handover (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43).

Brandes briefly teaches, listening to available downlink radio signals (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43).

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving

handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 2, Brandes discloses all the claimed features,

a method as claimed in claim 1, wherein the changing step includes receiving a partial handover command (during an existing transmission of data using a first radio transmission system, a change in parameters causes that transmission to be rerouted onto a second radio transmission system, so that the customer experiences no loss during the transmission of data – Fig. 1, column 2, lines 35 – 40. Switching device 3 includes a computer according to allocate for transmitter/receiver station one or more appropriate radio transmission systems for a communication – Fig. 1, column 4, lines 36 – 39. Also, switching over by the computer, in the context of a subscriber profile, one of entirely and

partially to another radio transmission system having a high transfer rate – ABSTRACT, Figs. 1, 2, column 1, lines 11 – 15, and claim 1).

Regarding claim 3, Brandes discloses,

a method as claimed in claim 2, wherein the terminal is adapted to listen to the downlink radio signal (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 7, lines 35 - 43), and to send a report on a listening result to a network element deciding the handover (the data concerning the subscriber profile and the transmission quality may be transmitted to the computer via an uplink form the mobile transmitter/receiver station, so that a signaling operation may be utilized to use these data for radio transmission system selection. The transmission quality may be measured using a signal field strength and/or an error rate – Figs. 1, 2, column 1, line 65 through column 2, line 14.Upon signaling, a subscriber profile that includes data about a service quality requested by the subscriber may be transmitted by transmitter/receiver station 10. These data include the transmission rate, a permissible error rate, maximum cost that the subscriber wished to incur for a transmission, and whether he or she wishes, for example, to transmit voice data or other data, e.g., a quality of data for transmission -

column 5, lines 29 – 40, column 6, lines 4 – 9, column 6, lines 20 – 28, column 7, lines 17 – 25, column 7, lines 25 - 43).

Regarding claim 4, Brandes discloses,

a method according to claim 1, wherein said method comprises performing the service handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) from a digital broadband data communication domain to (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) a cellular mobile data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43) or vice versa (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the

one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 5, Brandes discloses,

a method according to claim 1, wherein said method comprises selecting the downlink radio signal by means of a measurement signaling structure of inter-system handover of UMTS for the handover between said services (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 6, Brandes discloses,

a method according to claim 1, wherein said handover relates to a certain service remaining any other service transmitted via networks of said services still useable for said terminal (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network

capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43).

Regarding claim 7, Brandes discloses,

a method according to claim 1, wherein, in said method, the handover process is adapted to use a native network level signaling for application independent handover between said services (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 8, Brandes discloses,

a method according to claim 1, wherein said services are adapted to pertain to domains comprising a hybrid network system containing at least two functionally different

network systems (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 9, Brandes discloses,

a method according to claim 1, wherein the method further comprises the step of continuing unidirectional communication service reception in another cell area from current downlink communication received in a first cell area (during an existing transmission of data using a first radio transmission system, a change in parameters causes that transmission to be rerouted onto a second radio transmission system, so that the customer experiences no loss during the transmission of data – Fig. 1, column 2, lines 35 – 40. Switching device 3 includes a computer according to allocate for

transmitter/receiver station one or more appropriate radio transmission systems for a communication – Fig. 1, column 4, lines 36 – 39. Also, switching over by the computer, in the context of a subscriber profile, one of entirely and partially to another radio transmission system having a high transfer rate – ABSTRACT, Figs. 1, 2, column 1, lines 11 – 15, and claim 1).

Regarding claim 10, Brandes discloses,

a method according to claim 1, wherein the digital generally unidirectional communications service pertains to a domain comprising DVB-T cells establishing a DVB-T network (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 11, Brandes discloses,

a method according to claim 1, wherein the digital generally unidirectional communications service comprises a wireless multi-carrier signal transmission (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 12, Brandes discloses,

a method according to claim 1, wherein said services pertains to domains comprising cells of wireless cellular networks and the terminal is adapted to wirelessly communicate with said domains (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. A computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43).

Regarding claim 13, Brandes discloses,

data processing system comprising means for carrying out the method according to claim 1 (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column

2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 14, Brandes discloses,

a computer program comprising computer program code means adapted to perform the method of claim 1 when said program is run on a computer (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 15, Brandes discloses,

a computer program as claimed in claim 14 embodied on a computer readable medium (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 16, Brandes discloses,

a computer readable medium comprising program code adapted to carry out the method of claim 1 when run on a computer (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 17, Brandes discloses,

a carrier medium carrying the computer executable program of claim 14 (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 18, Brandes discloses,

a method for performing a handover of a service (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) from a cellular mobile data communication domain (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) to a digital broadband data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), the method comprising the steps of:

sending a measurement report of said received radio signals to said cellular mobile data communication domain (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28,

column 7, lines 35 - 43),

reserving resources of the digital broadband data communication domain by communicating between the cellular data communication domain and the digital broadband data communication domain (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

sending a handover command to said terminal from the cellular mobile data communication domain (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43),

sending a confirmation from said terminal to the digital broadband data communication domain **for moving the service delivered via the cellular mobile data communication**

domain to the digital broadband data communication domain (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43).

Brandes briefly teaches, measuring received radio signals of said domains at a terminal (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43),

but, is silent on, "**sending a confirmation from said terminal to the digital broadband data communication domain for** moving the service delivered via the cellular mobile data communication domain to the digital broadband data communication domain".

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 19, Brandes discloses,

a method according claim 18, further comprising the step of communicating in such a way that the cellular mobile data communication domain requests resources from the digital broadband data communication domain (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission

systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10),

but, is silent on, "**obtaining an acknowledgement on available resources** of the digital broadband data communication domain at the cellular data communication domain".

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field

strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 20, Brandes discloses,

a method for performing a handover of a service (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) from a digital broadband data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43) to a cellular mobile data communication domain (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64), the method comprising the step of:

sending a measurement report of said received radio signals to said digital broadband data communication domain (a computer may receive from a transmitter/receiver station,

in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43),

reserving resources of the cellular mobile data communication domain by communicating between the digital broadband data communication domain and the cellular mobile data communication domain (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

sending a handover command to said terminal from the digital broadband data communication domain (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data

loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43), and

sending a conformation from said terminal to the cellular mobile data communication domain for **moving the service delivered via the digital broadband data communication domain to the cellular mobile data communication domain** (it the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43),

but, is silent on, "measuring received radio signals of said domains at a terminal", and "**sending a confirmation from said terminal to the digital broadband data communication domain for** moving the service delivered via the cellular mobile data communication domain to the digital broadband data communication domain".

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a

base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 21, Brandes discloses,

a method according to claim 20, further comprising the step of communicating in such a way that the digital broadband data communication domain requests resources of the cellular mobile communication domain(transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a

speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10),

but, is silent on, "**obtaining an acknowledgement on available resources** of the cellular mobile communication domain at the digital broadband data communication domain".

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 – 14).

Regarding claim 22, Brandes discloses,

a system for controlling a handover of a terminal (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a digital generally bi-directional communications service (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) and a digital generally unidirectional communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising:

means for selecting according to a predetermined criteria between the available downlink radio signals (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43), and

means for changing to another available downlink radio signal for at least in part performing said handover (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 – 43).

Brandes briefly teaches, means for listening available downlink radio signals (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43).

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving

handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 23, Brandes discloses,

a user terminal for adapting a handover of the terminal (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a digital generally bi-directional communications service (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51.

The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) and a digital generally unidirectional communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising:

said receiver further for receiving a handover command for changing to another available downlink radio signal (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43).

Brandes briefly teaches, a receiver for measuring available downlink radio signals, and a transceiver for transmitting the measurements (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio

transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43),

but, is silent on, "said transceiver further for transmitting a confirmation for at least in part performing said handover".

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 24, Brandes discloses,

a network entity for controlling a handover of a service (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a digital generally bi-directional communications domain (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) and a digital generally unidirectional communications domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising:

means for selecting according to a predetermined criteria between the available radio signals (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43), and

means for changing to another available downlink radio signal for at least in part performing said handover (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43).

Brandes briefly teaches, means for receiving a measurement about available downlink radio signals (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43).

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the

mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Sainton teaches an adaptive control circuit for generating the frequency control signal and the protocol control signal in response to a user defined criteria. US Patent: 5,854,985 Dec. 29, 1998.

2. Corriveau teaches inter-exchange hand-off taking into account the service capabilities of the candidate cell. US Patent: 6,038,449 Mar. 20, 2000.

Contact Information

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael, Perez-Gutierrez, can be reached at (571) 272-7915.

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